



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/588,064

08/01/2006

Kiyoshi Kato

0756-7772

4335

31780

7590

10/30/2008

ERIC ROBINSON

PMB 955

21010 SOUTHBANK ST.

POTOMAC FALLS, VA 20165

EXAMINER

WEINBERG, MICHAEL J

ART UNIT

PAPER NUMBER

2827

MAIL DATE

DELIVERY MODE

10/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|--------------------------------------|--|
| Office Action Summary | Application No. 10/588,064 | Applicant(s) KATO, KIYOSHI | |
| | Examiner Michael J. Weinberg | Art Unit 2827 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,6,8,10 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 7, 9, 11, and 13-17 is/are rejected.
- 7) ☒ Claim(s) 1,3,5,7,9,11 and 13-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input checked="" type="checkbox"/> Other: <u>annotated portions of US 7,188,282</u> . |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/24/2007, 7/25/2007, and 8/1/2006.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 10/24/2007, 7/25/2007, and 8/1/2006 were considered by the examiner.

Election/Restrictions

2. Applicant's election without traverse of the species of claims 1, 3, 5, 7, 9, 11, and 13-17 in the reply filed on 10/1/2008 is acknowledged. Claims 2, 4, 6, 8, 10, and 12 are withdrawn from consideration.

Claim Objections

3. Claims 1, 3, 5, 7, 9, 11, and 13-17 are objected to because of the following informalities:

Because of awkward language, Applicants are requested to proofread the claims to ensure that the translation from Japanese is correct.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 5, 7, and 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Walmsley (US Patent 7,188,282, originally filed 12/2/2003).

Because of the length of the reference (774 pages), attached is a scan of annotated relevant portions for the convenience of Applicant. Other passages may apply as well, however.

With regard to independent claims **1, 3, 5, and 7**, Walmsley discloses a nonvolatile (flash) memory comprising a pair of memory elements (see abstract and col. 804 and 825) as a unit that can transit only from a first state to a second state (see col. 825) that are different in electric characteristics (threshold voltage or charge) by applying at least a voltage or a current (As is inherent for flash memory, charge is deposited in the form of voltage and current.),

wherein a memory cell is formed that stores 1-bit data by using two states that one memory element is in the first state (bit) and the other memory element is in the second state (inverse-bit). One bit data is stored using two bits (4 states).

With regard to **claim 13**, Walmsley discloses a nonvolatile memory of the above discussed claims wherein a unit for outputting a signal for determining if the memory cell stores data or not is provided. (See col. 805)

With regard to **claim 14**, Walmsley discloses that the memory element is a flash memory which has a floating gate. (See col. 651) Floating gates are known in the art to always be made of metal, so it is considered inherent that the charge accumulating layer comprises metal.

With regard to **claims 15-17**, Walmsley teaches an integrated circuit (IC) which may be used for identification (ID) data for the printer system which is inherently a card or tag.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 9 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Walmsley above in view of APA (admitted prior art, page 1 of the specification).

Walmsley discloses all the elements of the claim as discussed above, except he does not use a resistive memory programmed by a current. However, as is well known in the art and discussed in APA, magnetoresistive and phase change memories are resistive memories known to be programmed using current.

As is known, it would have been obvious to one of ordinary skill in the art to use either of these memories to replace the flash memory of Walmsley because programming these new memories is generally faster and takes less voltage.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Weinberg whose telephone number is (571)272-6424. The examiner can normally be reached on M-F 9:00 am-5:30 pm.

Art Unit: 2827

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Weinberg/
Examiner, Art Unit 2827

/Huan Hoang/
Primary Examiner, Art Unit 2827